

## **ABSTRACT**

### **Method of calibrating a microwave source**

The present invention relates to a method for calibrating the phase of a microwave source, in which:

- a calibration circuit is closed, the calibration circuit comprising an injection channel connected to a measurement channel via the source to be calibrated;
- a test signal is injected through the source to be calibrated, the test signal being injected on the injection channel,
- the phase  $\varphi_m$  of the signal having passed through the source to be calibrated is measured, the phase of the signal being measured on the measurement channel, characterized in that:
- the amplitude  $A_m$  of the signal having passed through the source to be calibrated is measured, the amplitude of the signal being measured on the measurement channel;
- the calibration circuit is opened at the source to be calibrated;
- the test signal is injected on the injection channel;
- the phase  $\varphi_f$  and the amplitude  $A_f$  of the signal present on the measurement channel is measured;
- a corrected phase value  $\varphi_c$  is determined, this corrected phase being the phase of a complex number  $U_c$ , calculated from two complex numbers  $U_m$  and  $U_f$ , where:

$$U_m = A_m \cdot \exp(i \cdot \varphi_m)$$

$$U_f = A_f \cdot \exp(i \cdot \varphi_f)$$

**Figure 6**